

ANNEX I RADIOLOGICAL PROTECTION

I. SITUATION AND ASSUMPTIONS

- A. The Radiation Health and Toxic Agent Branch (RH&TAB) of the Health and Family Services Cabinet (H&FSC) for is the primary state agency for responding to a radiological incident.
- B. There are several types of incidents involving radioactive material which could possibly occur in the Commonwealth, the most common being transportation accidents.
- C. Radioactive isotopes, primarily for medical use, are frequently shipped via the state's commercial highways, railways, barges and airport facilities. A spill or release is possible from a transportation accident.
- D. Accidents on industrial field sites involving density gauges, well-logging equipment or industrial radiographic units can be extremely dangerous.
- E. Accidents at a laboratory, research or storage facility where radioactive material is processed could involve fire, explosion, spillage and leakage, resulting in contamination of accident victims and emergency response personnel, the ingestion/inhalation of radioactive material, and external radiation exposure to those involved.
- F. Nuclear terrorism is a very real possibility, in the form of a threat or the actual detonation of a weapon. The threat by a terrorist group may or may not involve an actual weapon. All incidents must be treated as a real threat until a search proves otherwise.
- G. A military aircraft carrying nuclear weapons could crash in Kentucky, scattering nuclear materials in the vicinity of the crash.
- H. In the event of a nuclear weapons accident, RH&TAB and KyEM personnel will assist the U.S. Department of Defense (DOD) and the U.S. Department of Energy (DOE). KyEM will coordinate state and local activities, but DOD will have absolute direction and control authority in the established national defense area.
- I. No nuclear power plant exists in the state or within 50 miles of Kentucky. Kentucky is not considered to be in a radioactive material "ingestion pathway". There is minimal potential of a radiological accident from a nuclear power plant.
- J. The Paducah Gaseous Diffusion Plant (PGDP) located in Paducah is a uranium processing facility operated by the United States Enrichment Corporation. Some substances used or stored at PGDP pose a potential radioactive hazard should a release occur.

- K. Following a nuclear detonation, instruments and trained monitors currently available are insufficient for adequate population protection and decontamination. Neither the military or other federal agencies can initially be relied upon for post attack radiological assistance.

II. MISSION

- A. The primary mission of Kentucky's Radiological program is to provide state and local officials and individual citizens the skills, knowledge, situation information and guidance needed to do the following.
 - 1. Minimize the effects of ionizing radiation from a radiological incident in terms of injury and loss of life.
 - 2. Facilitate recovery efforts in a radiological environment.
- B. The secondary mission of Kentucky's Radiological Program is to provide support for emergency response to peacetime radiological incidents. This concept of addressing all types of radiological hazards that may be a threat agrees with and supports the principle of an integrated emergency management system.

III. DIRECTION AND CONTROL

- A. Preparedness Phase Operations.
 - 1. The Radiological Response System is developed, implemented, tested and maintained as part of a State Radiological Program.
 - 2. The Program is managed by RH&TAB.
- B. Response Phase Operations.
 - 1. Kentucky's Radiological Response System is that part of the total emergency management system that provides the following.
 - a. Detection, measurement and exposure control of the radiation hazard.
 - b. Preparation of radiological data in response to requests from higher authorities.
 - c. Evaluation of the hazard.
 - d. Application of appropriate countermeasures.
 - 2. Response Operations.

- a. RH&TAB is primarily responsibility and expertise in the area of radiological protection needed for response to a radiological incident.
- b. In the event of a significant radiological incident, the following actions will take place.
 - 1) Radiological information and requests for radiological assistance will be routed to the State Emergency Operation Center (EOC) at the Boone National Guard Center.
 - 2) The H&FSC will coordinate the radiological damage assessment operations for the State from the Operations Room of the State EOC.
 - 3) All public information pertaining to radiological operations will be channeled through, or coordinated with, the KyEM Public Information Officer (PIO) after approval of the H&FSC representative.

IV. CONCEPT OF OPERATIONS

- A. All responses to a radiological incident will be coordinated using the National Incident Management System (NIMS).
- B. Kentucky's Radiological Response System is managed under a four phase operational concept.
 - 1. Mitigation. Pre-incident program development and hazard identification to lessen the impact of any radiological incident.
 - 2. Preparedness. Actions taken over a period of time prior to radiological incident to prepare affected individuals to address the hazard (i.e. assignment of monitors, training, crisis augmentation, public information, etc.).
 - 3. Response. Determination of the extent and nature of any radiological emergency and the necessary protective actions.
 - 4. Recovery. Actions to expedite a return to pre-incident situation in a rapid, effective manner with minimum risk to affected individuals.
- C. Staff Assignment of the Radiological Incident Response is divided into two groups.
 - 1. The Analysis Group consists of personnel trained in radiological protection. They receive reports and process data for the evaluation group.
 - 2. The Evaluation Group consists of the RH&TAB representative and other agency staff members. Using the analysis group output, they analyze the situation and recommend to the KyEM Operations Officer measures to be taken by the general public and emergency workers to reduce radiation

exposure.

D. State Agency Assignments.

1. Preparedness Phase.

- a. Develop and maintain emergency plans and procedures for accomplishing the agency's assigned responsibilities and functions in a radiological emergency.
- b. Develop and maintain a functional radiological plan for the protection of its employees.
- c. Designate and train personnel to perform assigned tasks.
- d. Establish internal alerting and mobilization procedures.
- e. Develop and maintain inventories of available agency resources, including personnel, equipment, supplies and facilities.

2. Response Phase. Conduct emergency operations in accordance with executive orders and agency plans, procedures or as directed by RH&TAB.

3. Recovery Phase. Conduct operations in accordance with executive orders and agency plans and procedures to return the state to the pre-emergency level.

E. Regional assistance to support Kentucky's response to a Radiological incident.

1. Support is available via the Southern Mutual Radiation Assistance Plan (SMRAP) signed by the 14 states of the Southeast U.S. See Appendix I-1 SMRAP Activation Procedure.
2. Support for response to a radiological incident can be obtained through the Emergency Management Assistance Compact (EMAC). EMAC allows the Commonwealth to request technical support from surrounding states. EMAC can be activated by the KyEM Director.

F. Federal support for response to a radiological incident will be provided under the National Response Plan - ESF#10 "Oil and Hazardous Materials Response".

V. APPENDICES

A. I-1 Southern Mutual Radiation Assistance Plan Activation Procedure

APPENDIX I-1
SOUTHERN MUTUAL RADIATION ASSISTANCE PLAN
ACTIVATION PROCEDURE

I. REQUESTING STATE

- A. The procedure for Kentucky to initiate a request for assistance from another participating state under the Southern Mutual Radiation Assistance Plan (SMRAP) involves the following:
 - 1. CHS Radiation Health and Toxic Agents Branch (RH&TAB) personnel must determine that assistance is needed;
 - 2. CHS RH&TAB formulates a detail request of what is needed and why, and submit a request for the assistance through the Incident Command channels to the Kentucky Emergency Management office (502-564-7815).
- B. KyEM, in the name of the Governor, will contact the state from which assistance is needed. Contact phone numbers are listed at the end of this document. The request for SMRAP assistance will include the following information:
 - 1. description of problem;
 - 2. type of resources needed;
 - 3. where resources should be delivered to;
 - 4. what resources the state has committed;
 - 5. phone number to provide situation updates to the responding personnel.
- C. Concurrent with the above actions communication will be established by KyEM and CHS RH&TAB with radiation control program personnel in other SMRAP participating states for the purpose of alerting them to the incident and for obtaining from them any technical information that will be of use in resolving the incident

II. RESPONDING STATE

- A. The responding state's radiation control office will contact KyEM to verify the specified SMRAP assistance requested. The responding state will then provide a list of personnel and material it will provide and their estimated time of arrival at the incident site.

III. CHS RADIATION CONTROL PROGRAM

- A. Personnel in the CHS RH&TAB branch, upon being alerted by KyEM that support, from the state from which aid has been requested, has been dispatched

shall make plans to incorporate this assistance into the Incident Command System.

B. The CHS RH&TAB branch will keep the state supplying the requested aid advised of any changes:

1. in the situation at the incident site;
2. in the estimated time that the resources are needed on site; and
3. in how the resources are to be deployed.

IV. RESOURCES

A. U. S. Department of Energy (USDOE) 24 hour phone numbers:

1. 202-586-8100
2. 865-576-1005
3. 865-525-7885

B. U. S. Environmental Protection Agency (USEPA) / Radiological Assistance 24 hour phone number:

1. 334-270-3401

C. U. S. Nuclear Regulatory Commission (USNRC) 24 hour phone numbers:

1. 301-816-5100
2. 301-951-0550
3. 301-415-0550
4. 404-562-4400
5. 404-562-4410

D. Tennessee Valley Authority (TVA) Radiological Assistance 24 hour phone number:

1. 423-751-1700

E. States who are members of the SMRAP Compact: (24 hour contact numbers are maintained by the KyEM duty officer 502-564-7815)

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|-------------|--------------|
| 1. Alabama | 205-280-2200 |
| 2. Arkansas | 501-329-5601 |
| 3. Florida | 850-413-9900 |
| 4. Georgia | 404-635-7000 |
| 5. Kentucky | 502-564-7815 |

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| 6. | Louisiana | 225-925-7344 |
| 7. | Mississippi | 601-352-9100 |
| 8. | Missouri | 573-751-2748 |
| 9. | North Carolina | 919-733-3825 |
| 10. | Oklahoma | 800-522-0206 |
| 11. | South Carolina | 803-737-8500 |
| 12. | Tennessee | 615-741-0001 |
| 13. | Texas | 512-424-2000 |

V. TECHNICAL GUIDANCE

Southern States Energy Board, The Southern Mutual Radiation Assistance Plan,
December 2002 -- Phone 770-242-7712